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**ANNUAL REPORT**  
**OF THE**  
**EASTERN ROCKIES FOREST**  
**CONSERVATION BOARD**  
**FOR THE**  
**FISCAL YEAR**  
**1970-71**

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**1971**



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EASTERN ROCKIES FOREST CONSERVATION BOARD  
908, John J. Bowlen Building  
620 - 7th Avenue S.W.  
Calgary 2, Alberta

June 15, 1971

Sir:

I have the honour to submit herewith the Annual Report of the Eastern Rockies Forest Conservation Board for the fiscal year 1970-71, pursuant to the provisions of The Eastern Rocky Mountain Forest Conservation Act of 1947.

Respectfully submitted,

J.R.H. Hall  
Chairman

The Honourable Jack Davis,  
Minister of Fisheries and Forestry,  
Ottawa.

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J.R.H. Hall  
Chairman

The Honourable J. Donovan Ross, B.A., M.D.,  
Minister of Lands and Forests,  
Edmonton.





**EASTERN ROCKIES FOREST CONSERVATION BOARD  
1970-71**

**MEMBERS**

J. R. H. Hall	Chairman, Edmonton, Alberta
Dr. J. D. B. Harrison	Member, Ottawa, Ontario
A. T. Baker	Member, Calgary, Alberta

**PRINCIPAL OFFICERS**

W. R. Hanson	Chief Forester, Calgary, Alberta
J. P. Hourigan	Secretary, Calgary, Alberta





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## INTRODUCTION

The Eastern Rockies Forest Conservation Board was established under authority of "The Eastern Rocky Mountain Forest Conservation Act" which was assented to July 17, 1947, and ratified by an Alberta statute assented to March 31, 1948.

Set out in the Schedule to the Act is an Agreement that was subject to approval by the respective governments and which was to take effect on a date to be agreed upon by the Minister of Mines and Resources of Canada and the Minister of Lands and Mines of Alberta. The effective date of this Agreement was fixed by the respective Ministers as April 1, 1948.

The purpose or objects of the Eastern Rockies Forest Conservation Board are:

- (a) to construct, operate and maintain and to supervise the construction, operation and maintenance of projects and facilities required for the conservation of the forests and the protection of the watersheds in an Area<sup>1</sup> forming part of the Rocky Mountains Forest Reserve as defined in the Agreement;
- (b) to protect the forests in the Area from fire, insects, disease and other damage; and
- (c) to conserve, develop, maintain and manage the forests in the Area with a view to obtaining the greatest possible flow of water in the Saskatchewan River and its tributaries.

The Board's preliminary studies indicated that a policy under the Act of "obtaining the greatest possible flow of water in the Saskatchewan River and its tributaries" would have been dangerous and likely to cause floods and erosion at certain seasons of the year, followed by unacceptably small flow at others. Therefore, the Board's policy has been to manage the Conservation Area for optimum flow.

By inference of the Act, water is the most important product of the Conservation Area and watershed management is, therefore, of primary concern. The Board has adhered to the principle that watershed protection and improvement may be attained along with the utilization of the other resources, hence a policy of managing the Conservation Area on a multiple-use basis has been accepted.

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<sup>1</sup> The Conservation Area contains approximately 9,000 square miles on the East Slope of the Rocky Mountains bounded by the National Parks of Waterton Lakes, Banff and Jasper, and by the Brazeau-Athabasca divide.



In the Agreement drawn up between the two governments the first seven years of the Board's operation were designated the "capital period" and were characterized by a multi-million dollar development program. Following this period the Board handed over the product of its development program to the Alberta Forest Service to administer and operate.

The work of the Board during the 1970-71 fiscal year involved the writing of Conservation Unit Guides, watershed research, inspections to determine conditions and quality of management, and studies to evaluate watershed damage and the related causes.

The Board's jurisdiction over 933 acres of land was transferred from the Conservation Area to the Stony Indian Reserve. This land lay along the southern boundary of the Indian Reserve and was given in exchange for a right-of-way for widening of the Trans-Canada Highway where it traversed the land of the Stoney. The amending agreement also excluded a parcel of 240 acres from the Conservation Area in the Porcupine Hills; this exclusion was made for the purpose of settling farmers.

The Board's personnel establishment has undergone changes in the past two years. Positions for a Forester III and a Forester II plus a clerical position have been transferred to the Department of Lands and Forests; a Stenographer III position has been reclassified to a Typist III. The establishment now consists of: Chief Forester, Board Secretary, Research Forester, two technicians and typist. Apart from the Chief Forester and Secretary, the remaining positions are filled by members of the Alberta Public Service seconded to the Board.

The Alberta Forest Service has assigned to the administration and protection of the Conservation Area a permanent staff of 45 personnel employed in the Crookston, Bow River and Clearwater-Stony forests. This permanent staff is supplemented by 32 seasonal lookout men plus an intermittent number of temporary employees on road construction and maintenance, campground duties, staffed fire duty and winter burning programs.

The public's renewed awareness of their environment has created a demand for literature which tells under a popular label of "Conservation". The large volume of requests received by the Board for such literature prompted the Board to produce and publish a booklet entitled "Conservation in the West". The booklet was conceived with the intention of reaching a wide age group of the public and the response to its distribution, both by the public and government agencies, has been very gratifying. A by-product of this publication was a proposal by the Federal Government that the history of the Eastern Rockies Forest Conservation Board be submitted as a Canadian contribution for presentation at the United Nations Conference





## ADMINISTRATON

The Eastern Rockies Forest Conservation Board held five meetings during the fiscal year 1970-71. All of these meetings were held in Calgary and copies of the minutes were provided to the Minister of Fisheries and Forestry, Ottawa, and the Minister of Lands and Forests, Edmonton.

The Agreement connected with the Eastern Rocky Mountain Forest Conservation Act was amended by an agreement signed in January, 1971, between the Minister of Fisheries and Forestry and the Minister of Lands and Forests whereby 10,933 acres, more or less, were transferred from the Conservation Area to the Stony Indian Reserve. This land lay along the southern boundary of the Indian Reserve and was given in exchange for a right-of-way for widening of the Trans-Canada Highway where it traverses the land of the Stonys. The amending agreement also excluded a parcel of 240 acres from the Conservation Area in the Porcupine Hills; this exclusion was made for the purpose of resettling farmers.

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The Alberta Forest Service has assigned to the administration and protection of the Conservation Area a permanent staff of 95 personnel employed in the Crowsnest, Bow River and Clearwater-Rocky forests. This permanent staff is supplemented by 32 seasonal lookout men plus an indeterminate number of temporary employees on road construction and maintenance, campground duties, stand-by fire duty and similar summer programs.

The public's renewed awareness of their environment has created a demand for literature which falls under a popular label of "conservation". The large volume of requests received by the Board for such literature prompted the Board to produce and publish a booklet entitled "Conserving a Watershed". This booklet was conceived with the intention of reaching a wide age group of the public and the response to its distribution, both by the public and government agencies, has been very gratifying. A by-product of this publication was a proposal by the Federal Government that the history of the Eastern Rockies Forest Conservation Board be submitted as a Canadian contribution for presentation at the United Nations' Conference





on Problems in the Human Environment to be held in Stockholm in 1972. This proposal was agreed to by the Board and the Minister of Lands and Forests, and the report, termed a "case study", for submission to the U. N. Secretariat at New York, is now being written by the Chief Forester.

The Board was pleased to note the continuing trend in legislation and government organization toward matters which traditionally have ranked first in importance with the Board. This trend was exemplified by creation of the Alberta Department of the Environment, passage of an Alberta statute, "The Clean Water Act", together with the creation of a special authority, a council and a committee to implement government policy.

#### PROPOSED WOLF AREA STUDY

The Government of Alberta, having approved for harvesting purposes of the Clearwater Forest, part of the Bow River Forest and the adjacent Green Area, and the building of a dam and mill in the vicinity. The Board undertook to conduct a study to predict the effects of pulpwood harvesting upon other resources. The study drew heavily upon the findings of the study conducted by the Board on the North West Railroad Power area.

A copy of the study and recommendations of the Board was presented to the Alberta Government. The purpose of the study is still under consideration.

#### SUPERVISION AND INSPECTION

To ensure that Board policy is being applied and programs being carried out, the Board continued to require approval of recreational developments and commercial and industrial development of all lands. Inspections were carried out to determine the influence of Board policy on these developments.

Gas and oil exploration have continued to increase although exploration drilling somewhat and may have reached its peak. Drilling is being carried out by the Alberta Forest Service and efforts on the part of the companies are being put forth to avoid damage to the environment and other conditions.

on problems in the Hudson's Bay Company to be held in St. John's in 1912. This proposal was agreed to by the Board and the Minister of Lands and Forests and the report formed a "case study" for submission to the Department of Lands and Forests as well as a study being written by the Chief Forester.

The Board was asked to send the committee back to legislation and government organization. Various matters were nationally have worked out in importance with the Board. The Board was authorized by the Minister of the Lands and Forests of the Government, passage of an Act to create "The Crown Lands Act" together with the creation of a central authority, a council and a committee to implement government policy.

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## MANAGEMENT OF THE CONSERVATION AREA

In keeping with the Agreement to the Eastern Rocky Mountain Forest Conservation Act and a mutual agreement between the Board and the Department of Lands and Forests, the Board continued to carry out broad, top-level planning for the management of the Area. This section of the annual report indicates the Board's activities in management planning and supervision.

### CONSERVATION UNIT GUIDES

Conservation Unit Guides, which outline a broad basis for multiple-use planning, were written for the Lower North Saskatchewan (R5), the Nordegg-Baptiste (R2) and the Blackstone (R3) conservation units. This completes the management guides for all of the Conservation Area except the Cardinal-Brazeau Unit (R5, previously). This unit was added to the North West Pulp and Power forest management area as reserve timber and for management purposes transferred from the Clearwater Forest. It became Unit E 11 in the Edson Forest which is outside the Conservation Area and this unit will be managed under the terms of the agreement with the North West Pulp and Power Limited.

### PROPOSED PULP AREA STUDY

The Government of Alberta invited proposals for harvesting pulpwood in the Clearwater Forest, part of the Bow River Forest and the adjacent Green Area, and the building of a pulp mill in the vicinity. The Board undertook to conduct a study to predict the effects of pulpwood harvesting upon other resources. The study drew heavily upon the findings of the study conducted by the Board on the North West Pulp and Power area.

A copy of the study and recommendation of the Board was presented to the Alberta Government. The pulpwood proposal is still under consideration.

### SUPERVISION AND INSPECTION

To ensure that Board policy is being applied and programs being carried out, the Board continued to require approval of recreational development and commercial and industrial development of all kinds. Inspections were carried out to determine the fulfillment of Board policy and to evaluate its results.

Gas and oil exploitation have continued to increase although exploration declined somewhat and may have reached its peak. Damage is being checked by the Alberta Forest Service and more effort on the part of oil companies is being put forth to avoid damage to the environment and restore conditions





where damage has occurred. The A.F.S. is also carrying out an extensive survey of damage and has entered actively into restoration work with over 1,000 miles of seismic line being treated by use of government funds.

Coal mining remained at about a constant level but exploration went ahead at an increasing speed. Most of the coal-potential strata, from the coal-mining Crowsnest Pass in the south to and beyond the boundary of the Area in the north are being explored. All exploration is done under permit and on conditions set jointly by the Board and the A.F.S. Inspections have been made periodically and most of the damage is of an unavoidable nature and within acceptable limits.

No doubt new mining development is imminent and increased efforts of control will be needed to protect the watersheds.

Recreational use of the Area has increased greatly in recent years. Government efforts have mostly been used up in meeting urgent needs for additional camp and picnic facilities while too little has been done in planning the best use of the recreational resource in relation to the other uses of the land. The Board has continued to encourage planning and in the conservation units where recreational potential is high a land-use classification for that purpose was included in the "Guides".

A study in land use called Foothills Resource Allocation Study has been started by the Alberta Government with federal financial assistance through ARDA. The Board staff is represented on the steering committee and task forces dealing with phases of the work.

All other uses are being observed and generally the damage caused by lumbering and grazing is within acceptable limits. Roads continue to cause erosion and stream sedimentation beyond acceptable limits in some cases.





## MANAGEMENT BY THE ALBERTA FOREST SERVICE

The Alberta Forest Service, as a Division of the Department of Lands and Forests, administers the Conservation Area along with other forest lands of the Department. The following is their report of their activities in administration and management.

### CONSTRUCTION AND MAINTENANCE

A 112 foot steel bridge was erected on the James River (Bow Forest) to replace a decayed timber bridge. A 300 foot steel bridge with a 28 foot relief span was constructed across the Blackstone River on the Forestry Trunk Road at Mile 347, necessitated as a result of considerable flood damage to the previous bridge.

Two 28 foot and two 20 foot treated timber bridges and 8 large culverts were placed on the Bow Secondary Road in the Bow Forest to repair extensive flood damage.

A 100 foot steel crawl tower was erected in the Porcupine Hills (Crowsnest Forest). An office was constructed at the Elbow Ranger Station and an office and garage-cache combination were constructed at Turner Valley in preparation for centralization.

### FOREST PROTECTION

A total of 71 fires were recorded in the Conservation Area during the 1970 calendar year compared with 23 during the preceding year. The area burned over amounted to 4,483.78 acres compared with 35.20 acres during 1969.



Fires by Cause	Total Fires		Per Cent	
	1970	1969	1970	1969
Lightning	26	8	36.6	34.8
Recreation	19	8	26.8	34.8
Public Projects	10	1	14.0	4.3
Other Industries	6	5	8.5	21.8
Forest Industries	5	—	7.1	—
Unclassified	2	1	2.8	4.3
Unknown	2	—	2.8	—
Incendiary	1	—	1.4	—
	<u>71</u>	<u>23</u>	<u>100.0</u>	<u>100.0</u>

Fires by Forest	Number	Acres Burned
Crowsnest	6	50.00
Bow River	31	4,359.93
Clearwater-Rocky	<u>34</u>	<u>73.85</u>
	71	4,483.78

## TIMBER MANAGEMENT

Actual quota production for the 1970-71 fiscal year was up approximately twenty per cent over the previous year to almost eleven million cubic feet, representing 63 per cent of the authorized quota production. Total production from the Conservation Area is shown below under "Forest Production".

With the amalgamation of timber quotas, there has been a trend towards the replacement of small sawmills with larger sawmills located along railway trackage. New sawmills have been constructed over the past year at Harlech, Sentinel and Cochrane. Both the Sentinel and Cochrane mills are producing wood chips for improved utilization of the forest resource.

The following table summarizes the provincial reforestation program:

Forest	Scarified	Seeded	Conventional	Container	Thinned	Cones Collected
	Acres	Acres	Seedlings Planted	Seedlings Planted		
Crowsnest	268	547	121,980	99,700	140.0	697.9
Bow River	1,850	Nil	291,000	75,000	100.0	1,748.0
Clearwater-Rocky	1,344	50	126,486	Nil	410.4	711.0

In the 1970-71 fiscal year, quota holders in the Area have scarified 364 acres and collected 120 bushels of cones for seed extraction.





The province has begun to locate and develop seed production areas which are superior stands developed for the production of high quality tree seed. There are now three such areas under development in the Area with additional areas under consideration.

As the first five year quota terminates on April 30, 1971, there have been a number of quota amalgamations. It now appears as though several quotas within the Conservation Area will be cancelled for failure to produce forty per cent of the authorized quota volume. As of March 31, 1971, quotas issued within the Conservation Area were as follows:

Coniferous Timber Thousands of Cubic Feet				
Forest	No. of Quotas	Annual Cut Authorized by Quota	Allowable Annual Cut	Quota Cut as % of Allowable Cut
Crowsnest	12	5,291	7,659	69
Bow	23	5,779	19,944	29
Clearwater-Rocky *	33	7,366	38,600	19
Total Conservation Area	68	18,436	66,203	28

\* Including E 11 Management Unit

#### Forest Production

Statistics on timber licences, timber permits and production of lumber and related products in the Rocky Mountain Forest Reserve as reported by the Alberta Forest Service for the year under review are noted hereunder:

#### TOTAL

Number of Timber Quota Certificates Offered for Sale	—
Quota Volume Offered	—
Number of Timber Licences Offered for Sale	—
Number of Timber Licences Granted to Quota Holders	3
Volume of Timber Granted — Coniferous	1,719,142 cu. ft.



Salvage Licences Granted	—
Number of Special Timber Permits Issued	6
Volume of Timber Permitted	110,816 cu. ft.
Number of Miscellaneous Timber Permits Issued	239
Number of Active Timber Licences (62 LTB, 16 STP)	78

#### Production of Lumber and Related Products:

— Lumber	58,796,004 FBM
— Plywood logs, coniferous	—
— Railway ties	11,843 Pieces
— Round timber	400,845 cu. ft.
— Lath	1,449,250 Pieces
— Slabs & Fuelwood	726.91 Cords
— Christmas Trees	5,006
— Trees for transplanting	—





## FOREST LAND USE

### WATERSHED MANAGEMENT

The Forest Land Use Branch increased its liaison activities with both industry and other agencies concerning

environmental protection in the Conservation Area.

Applications for industrial land use dispositions, road locations, etc. were carefully reviewed and conditions of use were applied for the purposes of watershed protection. Where necessary, field inspections were made of development areas and suggestions for operating conditions were made. Considerable attention was paid to coal exploration and development programs during the year.

The Branch cooperated in the formulation of proposed road standard guidelines for application on pulpwood agreement areas.

An evaluation was made of the effect on watershed condition of the North Burnt Timber Creek fire which occurred in 1970, and plans were formulated for a restoration program to be initiated in early 1971.

### WATERSHED RESEARCH

Participation in the Alberta Watershed Research Program continued, as did membership on the Alberta

Committee of the International Hydrological Decade.

Cooperation in the Foothills Water Quality Study consisted of liaison, provision of a student technician for the summer and sampling assistance during storm events.

The Branch took part in an IHD Experimental Basin Review workshop at which the Tri Creek Watershed Study was one of the projects examined in detail. Routine data gathering continued in the study area during the year, although revisions were made to the objectives and a detailed research design is being drafted.

Cooperative mined land reclamation research was initiated and plans were made for a survey of mining areas in the Conservation Area to be conducted by the Branch during 1971. Restoration trials on mined areas in the Crowsnest Forest were continued on a small scale.

In cooperation with the Canadian Forestry Service a tentative study outline was proposed to evaluate changes in streamflow quality, yield and regime resulting from pulpwood harvesting and coal strip mine operations.



Planning progressed in preparation for construction of the Marmot Creek commercial treatment logging roads, and funds were allotted for that purpose. All activities were carried out in cooperation with E.R.F.C.B. and the Canadian Forestry Service.

A joint Alberta Forest Service/Fish and Wildlife Division forage resources study was continued in the Bob Creek area of the Crowsnest Forest. A controlled burn for improvement of brush infested range was successful in the same area.

#### WATERSHED RESTORATION (Crowsnest Forest)

Forty-two miles of seismic lines and five miles of gully erosion due to natural causes were treated for erosion control.

Three acres at Coleman Collieries Vicary Creek "A" level mine site were restored. The company supplied the labour, the materials, and carried out cleanup and landscaping. The Alberta Forest Service supervised the total operation including seeding and fertilizing of the location. Two coal exploration sites were also landscaped, sown to grass and fertilized.

Restoration trials on coal mining waste areas continued. Trials consisted of seeding various grass species and planting of tree species on coal mining waste areas at high elevation sites. Observations to date are that white spruce and Douglas fir seedlings are surviving fairly well. High mortality is observed in lodgepole pine. An evaluation on the establishment and survival of the various grass species sown has not been made.

Six abandoned millsites and the old Wildigg Ranch site were restored. Work entailed burning and burying debris, landscaping, seeding to grass and fertilizing.

#### (Bow River Forest)

One hundred and four miles of seismic lines were treated for erosion control.

#### (Clearwater-Rocky Forest)

An erosion survey was carried out on 365 miles of seismic lines within the forest to determine locations where corrective work is necessary.

A total of 1,224 miles of seismic lines were treated for erosion control with funds from the Departmental Geophysical Line Restoration project. The total cost of carrying out this work was \$51,310.





**GEOPHYSICAL EXPLORATION –** Geophysical activity within the Forest  
**GAS AND OIL DEVELOPMENT** Conservation Area declined considerably from 1969-70. One hundred and ninety seismic programs were approved during the year. Approximately eight hundred miles of new seismic lines were constructed.

Oil and gas development continued at a fair pace throughout most of the year. The following table illustrates total producers, wells drilled in 1970-71 and abandonments.

	Total Producing Wells	Wells Drilled 1970-71	Abandoned Wells 1970-71
Crowsnest Forest	30	3	Nil
Bow River Forest	27	11	2
Clearwater-Rocky Forest	33	19	7
	<u>90</u>	<u>33</u>	<u>9</u>

**COAL EXPLORATION** Twenty-two coal exploration programs were applied for in the Conservation Area and were approved. Activity is presently confined to potential coking coal outcrops occurring in the Kootenay, Wapiti and Blairmore formations.

**OTHER MINERAL EXPLORATIONS** One quartz exploration program and one copper exploration program were applied for in the Crowsnest Forest and approved.

**RECREATIONAL PLANNING** All recreational area facilities were utilized to capacity during the summer months particularly on the weekends. Field reports indicate that mid-week use of facilities is increasing which suggests that the public is using the Area for holiday vacation periods.

During 1970-71, two recreation area site plans were approved by the Board, namely Sibbald Lake Recreation Area in the Bow River Forest and Beaver Mines Lake in the Crowsnest Forest. Both are new areas being developed by the Forest Service. To date, a total of 28 recreation area plans have been approved by the Board. These 28 areas are designed to accommodate a total of 452 picnic units, 367 tent units and 243 trailer units.

# GEOLOGICAL EXPLORATION - GEOGRAPHICAL EXPLORATION - GAS AND OIL DEVELOPMENT

Approximately eight hundred miles of new seismic lines were constructed during the year. One hundred and twenty seismic programs were approved during the year.

Oil and gas development continued at a fast pace throughout most of the year. The following table illustrates total productive wells drilled in 1970-71 and 1971-72.

Producing Wells	1970-71	1971-72
Crowfoot Forest	20	3
Box River Forest	22	11
Clearwater Forest	21	10
Forest	20	22
		1
		0

## COAL EXPLORATION

Conservation Area and was approved. Activity is presently confined to potential leasing coal outcrops occurring in the Kootenai, Windfall and Blaine formations.

One quartz exploration program and one copper exploration program were applied for in the Crowfoot Forest and approved.

RECREATIONAL PLANNING  
All recreational area facilities were outlined to capacity during the summer months particularly on the weekends. Field reports indicate that mid week use of facilities is increasing which suggests that the public is using the Area for holiday vacation periods.

During 1970-71 two recreation area plans were approved by the Board, namely Silver Lake Recreation Area in the Box River Forest and Beaver River Lake in the Crowfoot Forest. Both are now being developed by the Forest Service. To date a total of 15 recreation area plans have been approved by the Board. These 15 areas are designed to accommodate a total of 482 picnic units, 387 rest units and 243 toilet units.

Because of the Foothills Resource Allocation Study, the Department placed a general freeze on all types of recreational dispositions within the Area during the year 1970-71.

An updated summary of Board approved Recreation Area site plans indicating facilities and services is shown as Appendix "A".

## GRAZING

Although precipitation during May was low, heavy rains in June resulted in good forage production. During the latter part of the season, favorable conditions prevailed and in most areas livestock remained in the Area to the end of October. Actual use for the year amounted to 83,508 A.U.M.'s as compared to 85,466 in 1969.

Grazing revenue amounted to \$74,240 from 270 permits on 91 range allotments. As in 1969 grazing fees were \$1 in the Porcupine District and \$0.80 elsewhere in the Area.

## RANGE CONDITION

### 1. Crowsnest Forest

General range condition was reported as being good throughout the area. Natural congregation areas such as those next to fences, water developments, salt grounds, etc. were the only areas reported in poor condition.

### 2. Bow River Forest

All allotments in the Bow Forest with the exception of the Highwood area reported favorable range condition. Unsatisfactory range condition in the Highwood was attributed to poor salting and riding which resulted in poor distribution of livestock.

### 3. Clearwater-Rocky Forest

Range condition in the Clearwater-Rocky Forest was reported in fair to good condition throughout.

## GRAZING STATISTICS

### Total Number of Cattle Grazed Under Permit

	Yearlings		Mature		Total	
	69	70	69	70	69	70
Crowsnest	7728	6566	7079	5825	14807	12391
Bow River	2475	1812	6615	7079	9090	8891
Clearwater-Rocky	197	161	919	877	1116	1038
<b>TOTAL</b>	<b>10400</b>	<b>8539</b>	<b>14613</b>	<b>13781</b>	<b>25013</b>	<b>22320</b>





**Total Number of Horses Grazed Under Permit**

	1969	1970
Crowsnest	-	-
Bow River	286	232
Clearwater-Rocky	142	35
<b>TOTAL</b>	<u>428</u>	<u>267</u>

**Number of Grazing Permits Issued**

	1969	1970
Crowsnest	174 cattle 1 sheep	170 cattle
Bow River	82 cattle 4 horse	82 cattle 4 horse
Clearwater-Rocky	13 cattle 7 horse	12 cattle 2 horse

**Actual Use in A.U.M.'s \***

	1969	1970
Crowsnest	45,611	46,695
Bow River	33,898	33,045
Clearwater-Rocky	5,957	3,768
<b>TOTAL</b>	<u>85,466</u>	<u>83,508</u>

**Revenue From Grazing Permits**

	1969	1970
Crowsnest	\$42,745	\$42,197
Bow River	29,526	28,503
Clearwater-Rocky	3,798	3,540
<b>TOTAL</b>	<u>\$76,069</u>	<u>\$74,240</u>

**Summary**

	1969	1970
Revenue	\$76,069	\$74,240
No. of Livestock	26,363	22,320
No. of Allotments	95	91
No. of Permits	281	270
No. of A.U.M.'s	85,466	83,508

\* Includes all stock under permit only.



**Livestock Losses**

Causes of Loss	Numbers Lost	
	1969	1970
Poisonous Plants	41	11
Predators	3	4
Lightning	6	2
Hunters	13	4
Automobiles	7	3
Drowning	2	—
Natural or Unknown	113	110
Theft, Unaccounted, Missing	29	36
<b>TOTAL</b>	<b>214</b>	<b>170</b>

The number of animals lost to poisonous plants is undoubtedly higher than the eleven listed, however, in most cases animals are not found for some time and thus the actual cause of death is impossible to determine.

During the 1970 grazing season rustling was reported to be on the increase in ranching areas adjacent to the Forest Reserve.

**DIVISION OF RANGE****1. Crowsnest Forest**

- a. Grazing has been terminated permanently in the Gladstone Creek Range Allotment in the Castle District. The area could adequately support very few livestock under only marginal range condition and the termination was the result of weighing the range value of the area against the watershed, recreational and fish and wildlife value of the area.
- b. The SE¼ and S½ of the NE¼ of 8 in Township 10, Rge. 1, W5th Meridian was transferred to King Brothers in trade for land formerly owned by them in the Conservation Area. Both areas involved were in the Sharples Creek Allotment and adequate stocking adjustments have been made.
- c. Use in the former Daisy-Vicary Creek Allotment by sheep has been terminated. The lower portions of the area are to be used by the Gap Stock Association to improve higher elevation range in the Gap Allotment. No increase in livestock use was granted the Gap Stock Association.





## 2. Bow River Forest

- a. Section 6 of 18-4-W5th Meridian, a former grazing lease within the Area was included in the Sullivan Flat range allotment.

## 3. Clearwater-Rocky Forest

- a. No changes were made in the allotment boundaries.

The Grazing Report for 1970 is attached as Appendix "B".

### MULTIPLE-USE PLANNING

In February of 1970 final agreement was reached between the Canada Land Inventory and the Alberta

Conservation and Utilization Committee to proceed with a pilot land use study for the Foothills Region. The terms of reference essentially stipulated that the study would be carried out by the Alberta Forest Service and financed by Federal Canada Land Inventory funds. The project was designated the Foothills Resource Allocation Study 38015.

The study was designed to evaluate the resources of the Foothills Region of Alberta and to prepare an integrated land use plan which would appropriately allocate these resources for various uses. This plan is intended to function as a design which will define the most beneficial allocation of the renewable resources of the region in order that all provincial agencies and other planning agencies may program their activities about this plan.

Ancillary to this is the secondary purpose which involves the delineation and zoning of high potential outdoor recreation areas in order to protect them for future development.

The boundaries for the Foothills Study correspond with the Green Zone boundary in the south and follow the Brazeau-Pembina watershed divide in the north. The area enclosed by these boundaries is in the order of 10,000 square miles most of which is Crown land. Subdivisions of the area have been accomplished using major watershed divides. Accordingly, 14 watersheds have been delimited and these will serve as planning and management units (see following maps).

One of the 14 units has been selected as a major pilot study unit in which to test the designed methodology. This is the Kananaskis-Spray Lakes watershed, together with the Bow Corridor. In addition, the Highwood and Upper Oldman watersheds have been chosen as sub-pilot areas. These three units are to be studied and plans prepared for them prior to consideration of the other 11 units.



The newly established Multiple Use Planning Section in the Forest Land Use Branch was assigned responsibility for the design and completion of the Foothills Resource Allocation Study. The section head and initial staff of geographer, forester and technician started designing the study in mid-summer of 1970. This staff is expanding somewhat as the study develops and presently includes an additional forester plus a clerk-typist.

Early in the fall the study design had been completed. This design was subsequently submitted to the Canada Land Inventory staff in Alberta and Ottawa as well as to the Director of Forestry and the Conservation and Utilization Committee. Opinions expressed indicated approval in principle as well as high regard for the analysis design.

Subsequently the entire Phase I methodology, which focuses on "Recommendations for Land Use According to Present Policy" has been expanded and detailed; step by step network diagrams have been prepared to serve as controls through the duration of the analysis.

Five task forces have been organized to serve in a working capacity to supply resource data at various stages in Phase I.

A detailed working methodology has been compiled for Phase I of the study. This methodology is in report form and includes text, diagrams and tables. Completed in March, 1971, this report is intended to serve as a working manual for cooperating agencies.

Phase II of the Foothills Study focuses on recommended land uses based on present demand. This phase has been going through step by step development and review. Several resource economists from many areas are being contacted. It is hoped that a workable socio-economic demand analysis can be finalized late in April, 1971.

The Forest Capability project has been completed on schedule within the Conservation Area.

The following map blocks have been classified under the CLI programs:

Scale: 1:63,360.

82 G/1, 2, 7, 8, 9, 10, 15 and 16.

82 J/1, 2, 7, 8, 9, 10, 14, 15 and 16.

82 N/15 and 16.

82 O/2, 3, 6, 7, 10, 11, 12, 13, 14 and 15.

83 B/2, 3, 4, 5, 6, 7, 10, 11, 12, 13, 14 and 15.



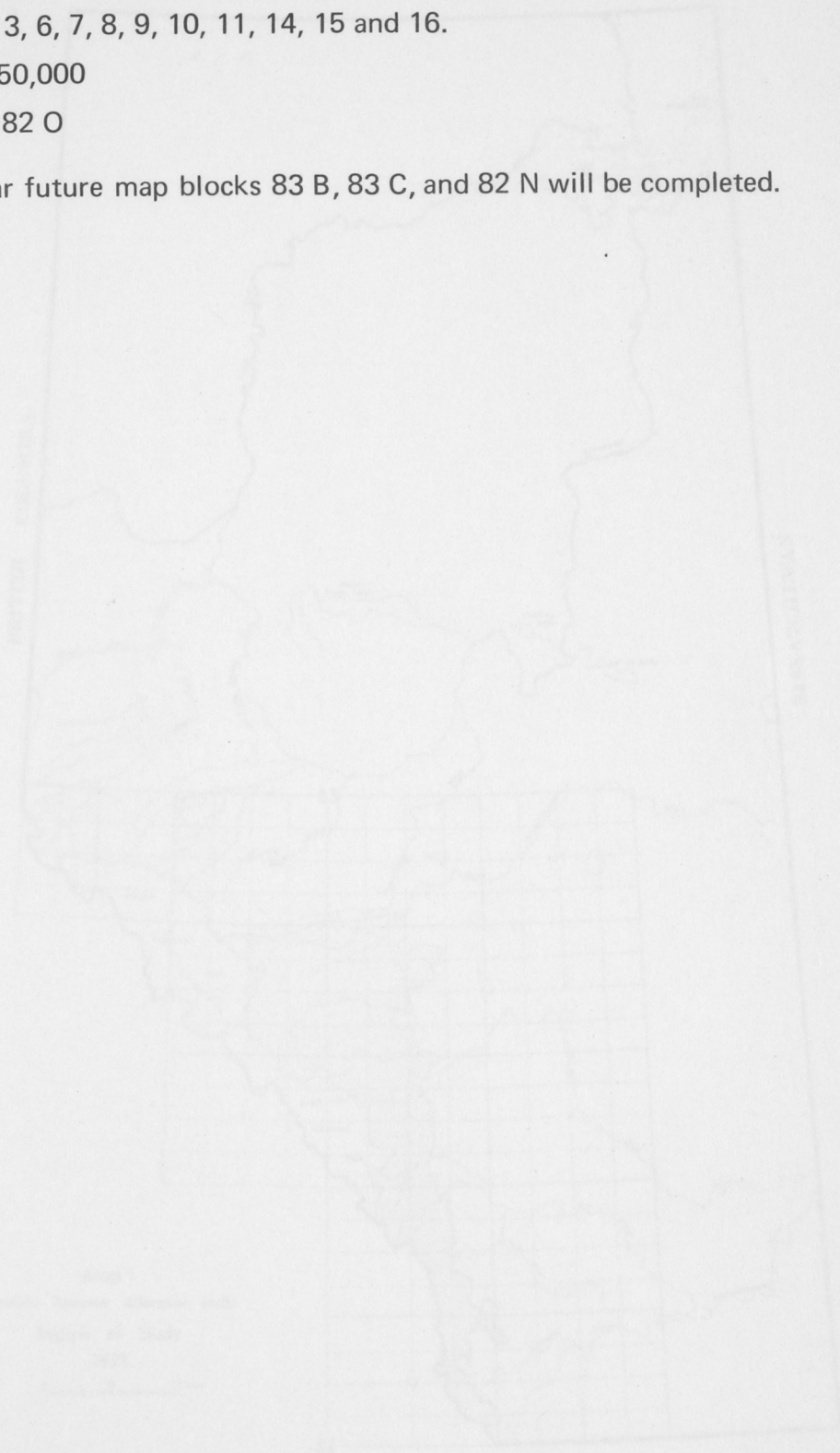


83 C/1, 2, 3, 6, 7, 8, 9, 10, 11, 14, 15 and 16.

Scale: 1:250,000

82G; 82J, 82 O

In the near future map blocks 83 B, 83 C, and 82 N will be completed.

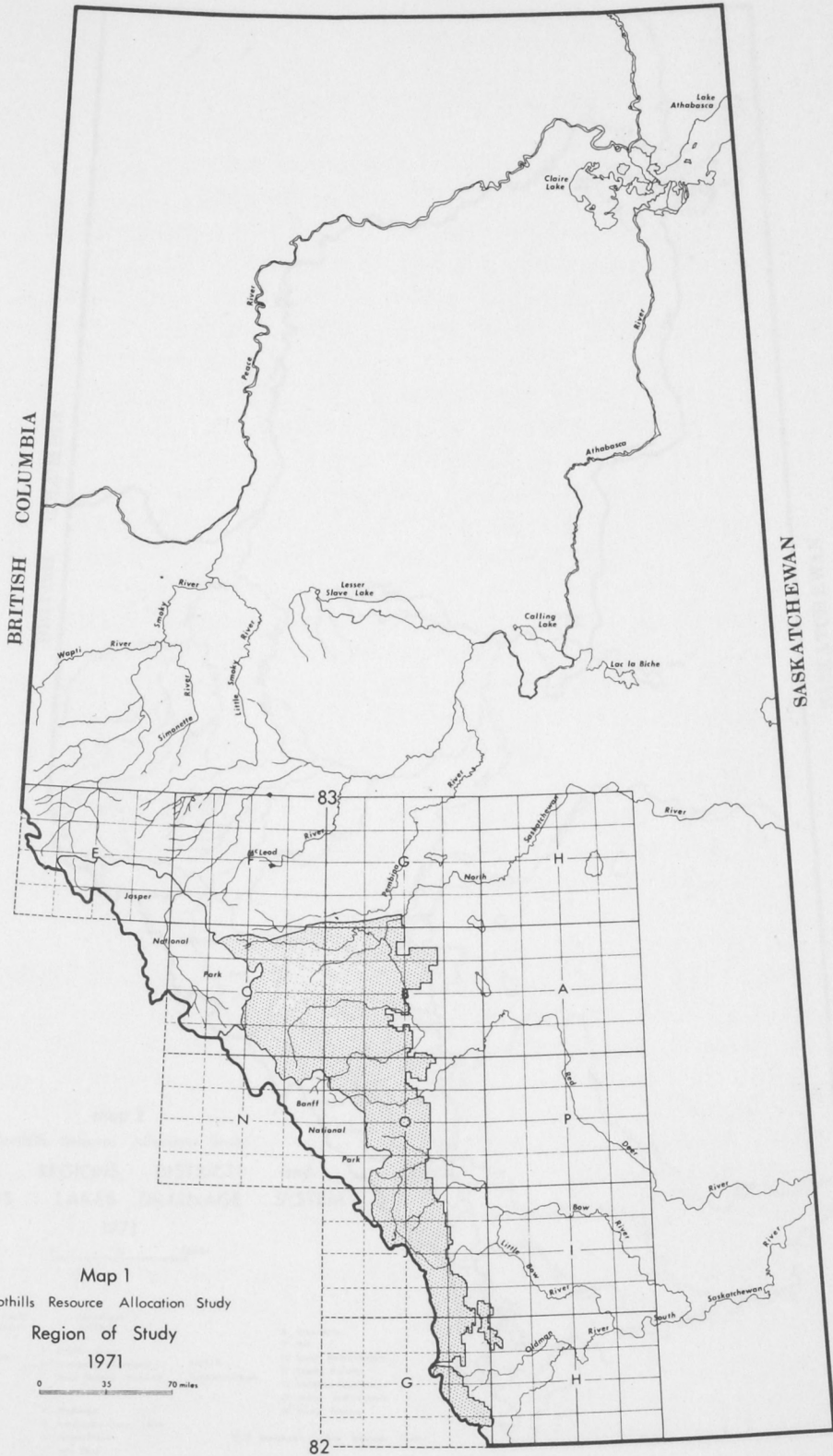


83 C 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13 and 14

Scale: 1:250,000

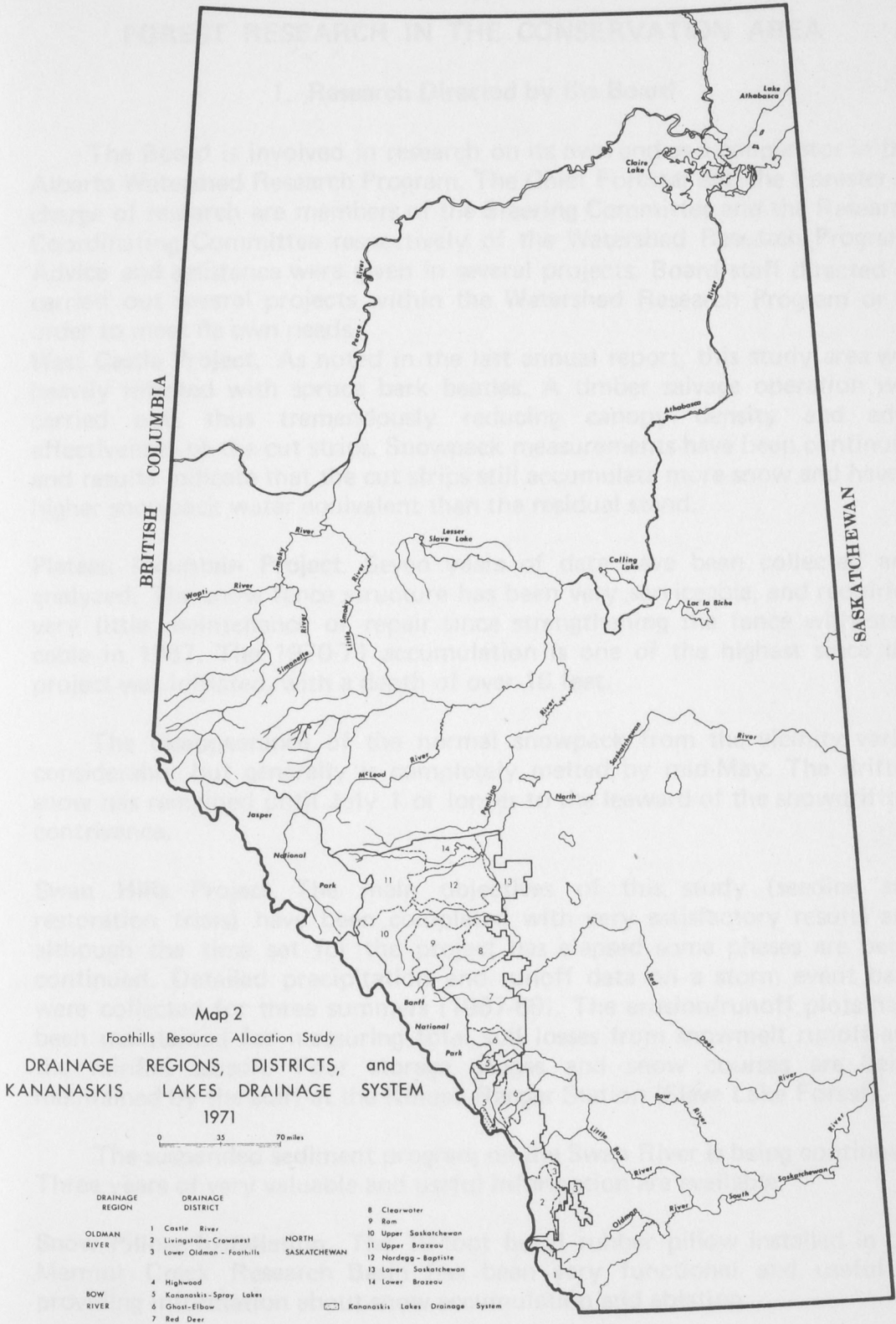
83 C 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14

In the near future map blocks 83 B, 83 C, and 83 D will be completed.











## FOREST RESEARCH IN THE CONSERVATION AREA

### 1. Research Directed by the Board

The Board is involved in research on its own and as a cooperator in the Alberta Watershed Research Program. The Chief Forester and the Forester in charge of research are members of the Steering Committee and the Research Coordinating Committee respectively of the Watershed Research Program. Advice and assistance were given in several projects. Board staff directed or carried out several projects within the Watershed Research Program or in order to meet its own needs.

**West Castle Project.** As noted in the last annual report, this study area was heavily infested with spruce bark beetles. A timber salvage operation was carried out, thus tremendously reducing canopy density and edge effectiveness of the cut strips. Snowpack measurements have been continued and results indicate that the cut strips still accumulate more snow and have a higher snowpack water equivalent than the residual stand.

**Plateau Mountain Project.** Seven years of data have been collected and analyzed. The snow fence structure has been very serviceable, and requiring very little maintenance or repair since strengthening the fence with steel cable in 1967. The 1970-71 accumulation is one of the highest since the project was initiated, with a depth of over 16 feet.

The disappearance of the normal snowpack from the vicinity varies considerably but generally is completely melted by mid-May. The drifted snow has remained until July 1 or longer to the leeward of the snowdrifting contrivance.

**Swan Hills Project.** The main objectives of this study (seeding and restoration trials) have been completed with very satisfactory results and although the time set for the project has elapsed some phases are being continued. Detailed precipitation and runoff data on a storm event basis were collected for three summers (1967-69). The erosion/runoff plots have been maintained for measuring total soil losses from snowmelt runoff and the rainfall season. Four storage gauges and snow courses are being maintained by the staff at the Kinuso Ranger Station (Slave Lake Forest).

The suspended sediment program on the Swan River is being continued. Three years of very valuable and useful information are available.

**Snow Pillow Installation.** The 10-foot butyl rubber pillow installed in the Marmot Creek Research Basin has been very functional and useful in providing information about snow accumulation and ablation.

# FOREST RESEARCH IN THE CONSERVATION AREA

## Research Directed by the Board

The Board is involved in research on its own and as a cooperator in the Alberta Watershed Research Program. The Chief Forester and the Forester in charge of research are members of the Steering Committee and the Research Co-ordinating Committee respectively of the Watershed Research Program. Advice and assistance were given in several projects. Board staff directed or carried out certain projects within the Watershed Research Program or in order to meet its own needs.

West Castle Project. As noted in the last annual report, this study was very heavily infested with spruce bark beetles. A timber salvage operation was carried out, thus tremendously reducing canopy density and the effectiveness of the cut stage. Snowpack measurements have been continued and results indicate that the cut stage still accumulates more snow and has a higher snowpack water equivalent than the residual stand.

Pelican Mountain Project. Seven years of data have been collected and analysed. The snow force structure has been very favourable and resulting very little maintenance or repair since strengthening the fence with steel cable in 1957. The 1970-71 accumulation is one of the highest since the project was initiated with a depth over 18 feet.

The disappearance of the normal snowpack from the vicinity of the study area but generally is not seriously melted by mid-May. The drifting snow has remained until July 1 or longer to the forward of the snowdrifting corridor.

Swan Hills Project. The main objective of this study (erosion and sedimentation) has been completed with very satisfactory results and although the time set for the project has elapsed some progress is being continued. Detailed precipitation and runoff data on a storm event basis were collected for three summers (1967-69). The erosion/runoff data have been maintained for measuring total soil losses from snowmelt runoff and the rainfall season. Four storage gauges and snow courses are being maintained by the staff at the Kinross Ranger Station (Slave Lake Forest).

The suggested sediment program on the Swan River is being continued. Three years of very valuable and useful information are available.

Snow Pillow Installation. The 10 foot bulb meter pillow installed in the Marmot Creek Research Basin has been very functional and useful in providing information about snow accumulation and ablation.



**Timber Harvesting Plan in Marmot Basin.** Approval for logging road construction was granted and Board staff in cooperation with Canadian Forestry Service and Alberta Forest Service will lay out the location line design. Road construction will commence in July or August. Logging operations are scheduled for 1973.

**Analysis of Storage Gauge Data.** The storage precipitation network has been in operation since 1954 and has yielded very useful seasonal precipitation information for the high mountain country of the East Slope, not available elsewhere. The information has been requested by many agencies concerned with water and watershed management. There was a need to review the network and the data and to bring both up to date. This was done during the year.

A detailed computer analysis of the data was completed. Correlations were established between stations and estimates for missing records were derived, based on regression equations. A master copy (computer print-out) was made available showing the entire record: high-low-normal precipitation, deviations from the normal, ratio of winter precipitation to the annual, various statistical parameters, and regression equations. All of the data were placed on IBM cards, thus making it easy to up-date the record annually.

A new method of measuring the contents of the tanks was devised and new precipitation measuring rulers manufactured. A field inspection to determine the physical and site condition of all the gauges commenced during the winter and will be completed by late spring. An evaluation of each gauge site will be made using the field data and computer results to determine which gauges should be abandoned, moved, or new locations established. Then, in cooperation with the Alberta Forest Service, necessary repairs will be made so that the entire network will be in good condition. This project, which has proved to be of greater worth than originally envisaged, is now modernized and the data made available for use by a wider range of users.

**Foothills Water Quality Study.** This is a cooperative study under the Alberta Watershed Research Program with the Board supplying the coordination, direction and other assistance.

The study developed as a result of considerable public interest in the proposed coal mining by CanPac Minerals, Ltd., and the extraction of natural gas by Imperial Oil, Ltd., in the Bow River west of Millarville. This area is very important as a source of water for Calgary and for its high recreation potential.



The broad objective of the study is to describe and document the natural levels of water quality prior to industrial development, and predict the potential hazards and biological implications that could result from development. Fifteen tributary streams in the Elbow River, Threepoint Creek and Ware Creek drainages (encompassing an area of about 100 square miles) were sampled mainly for suspended sediment. Other samples were collected at key locations for: water chemistry, bottom fauna (qualitative analysis), bacteria, phenols, oils and greases, and pesticides. Intensive sampling was conducted on a storm event basis with routine sampling at other periods.

Only two significant storm events occurred during the field season. The results of the suspended sediment program indicate that more intensive sampling will be required to adequately reconstruct the sediment hydrograph and develop an efficient statistical methodology for quantitatively evaluating the physical water changes.

On several occasions, suspended sediment samples were collected before, during and after construction activities (channel relocation and pipeline crossings). An inventory was made of the major sources of erosion in the study area.

The study is to be continued through two more major storm events.

**Mined-Land Reclamation Study.** The Board took part in this cooperative study doing field survey and topographic analysis of the selected locations.

**International Hydrologic Decade.** Contributions were made to this program in the form of membership on the Alberta Committee, data gathering and taking part in the Experimental Basin Review workshop.





## 2. Research by the Canadian Forestry Service

In the Memorandum of Agreement contained in the "Eastern Rocky Mountain Forest Conservation Act" the Board is empowered to make arrangements with other agencies for the undertaking of research and other scientific investigations. The Board has received generous support and assistance over the years from the Canadian Forestry Service, and a report of their work for the year under review is outlined hereunder.

### FOREST HYDROLOGY

The Canadian Forestry Service continued as a member of the inter-agency Alberta Watershed Research Program by supplying the research coordinator and the services of four professional and five support positions.

A water quality sampling model was proposed for test in the anticipated coal lease areas of the Elbow and Sheep watershed southwest of Calgary. Three Canadian Forestry Service personnel were maintained on a storm-standby basis to facilitate rapid deployment into the study area. A living-laboratory trailer and 4-wheel drive vehicle were also supplied.

Results from this model and test indicate that sampling intensities of greater than one sample per watershed per six-hour period are necessary on 12-14 watersheds during the first 24 hours of a rain storm, in order to adequately describe the average suspended sediment load originating in a given area. Three to five watershed samples at six-hour intervals appear sufficient twenty-four hours or more from the storm start. This study is scheduled to continue one more season to refine and test the prediction model.

Commercial harvest of Marmot, Cabin sub-basin, is now scheduled for 1973. Cut block and road locations are to be made during 1971. Road construction is scheduled for completion in 1971 to allow two years evaluation of road-originated sediment prior to harvest.

Transpiration studies on individual trees and stands located at five elevations were started in Marmot-Twin sub basin. These studies are expected to indicate ground water discharge area-time patterns for purposeful manipulation of local ground water hydrologic regions in the future.

Two studies in snow manipulation are current — one at a site on the James River in the Conservation Area northwest of Sundre, and one in Streeter experimental basin.

The micro environments that result from timber harvesting patterns can be used to manipulate snow accumulation areas and regulate melt rates. Both coniferous and deciduous forests can be effectively manipulated.



In the James River area, a 10 X 10 latin square design of circular openings ranging from one-fourth to six tree heights in diameter is being created. The trees in most of the openings have been felled but the residual slash remains. Limited personnel has caused slow progress on this study. No opening data have been collected, however, a two-hundred plus point snow course through the uncut surroundings and intervening areas shows uniform snow accumulation under the timber.

In Streeter basin, small openings in aspen accumulate more snow and retard its melt rate over that under the surrounding non-leaved deciduous canopy. Snow in these small openings or under the surrounding canopy appears little influenced by the strong Chinook periods prevalent in this area; this in sharp contrast to accumulations of snow in areas either cleared or naturally bare of trees which are bared to the ground several times each winter.

#### SILVICULTURE AND FOREST ECOLOGY

Regeneration studies initiated in association with controlled burning experiments in lodgepole pine slash were continued at the Kananaskis research forest. This work assesses and compares spot and broadcast seeding, container and conventional planting, and examines the effects of fire on seed supply from slash and seed trees. Preliminary results will be reported in 1972. During the year the Kananaskis forest was also used as the site for field testing of a number of experimental container types for potential application in subalpine conditions.

Field work was completed for studies of biomass of aspen and lodgepole pine types. Data are now being analyzed and reports prepared describing the effects of clonal structure in aspen and stand density in lodgepole pine on total biomass and on the proportion of biomass in stem, branch, foliage and root components.

#### LAND CLASSIFICATION AND SOILS

During 1970-71 the Canadian Forestry Service continued advisory and checking services to the Alberta Forest Service in the Canada Land Inventory Program. In addition, land classification was undertaken for a number of map sheets vital to initiation of the Foothills Resource Allocation Study.

#### FOREST INSECT AND DISEASE CONDITIONS

Information on insect and disease conditions in the Conservation Area was obtained from the annual field activities of the Insect and Disease Survey and from a special survey for spruce bark beetle in the Crowsnest Forest.





The infestation of the spruce beetle in the Crowsnest Forest remains the most serious pest in the area. An appraisal of spruce stands infested by spruce beetles was again carried out and an aerial survey was conducted to locate new areas of infestation and to note changes in tree mortality and beetle activity in the known infested stands. Incidence of attack in 1970 was about one-third of that in 1969. In 12 stands examined, the average percentage of volume successfully attacked in 1970 was 1% and the largest percentage of volume attacked (South Castle River) was 2.75%. Although beetle activity in the outbreak areas declined during the past two years, current population levels still constitute a potential hazard to the residual and uninfested mature spruce stands in southwestern Alberta. Two previously unrecorded infested stands were observed; one along upper Lost Creek and the other along the lower end of Cummings Creek. Continued surveillance of spruce beetle activities is anticipated for 1971.

Defoliation of aspen by a complex of defoliators was lighter than in 1969 and found mainly along the eastern edge of the Area. Spruce spanworm and large aspen tortrix were intermixed in many aspen stands and they caused patchy light to severe defoliation. The forest tent caterpillar was present in some areas but did not contribute appreciably to the defoliation.

Winter injury of conifers, "red belt", occurred in several valleys of the Bow River and Crowsnest forests from Kananaskis Lakes south to the West Castle River. Severe injury was noted in the upper end of the following river valleys: Highwood, Kananaskis, Wilkinson, Cataract, Lost, Cummings, Racehorse, Vicary, Crowsnest, West Castle and South Castle. Winter damage to buds and shoots of aspen was severe on the west slopes of the Porcupine Hills north of the Ranger Station and on the north slopes in Streeter Basin.

Shoestring root rot has been recorded from many locations along the foothills. Conifers that have been predisposed by winter injury are very susceptible to attack by this root rot. Mortality of spruce and lodgepole pine has occurred in a number of areas, particularly in the northern part of the Bow River Forest and in the Clearwater Forest.

#### FOREST FIRE RESEARCH

Fire researchers are involved in four studies in the East Slope area, including two studies in Waterton Lakes and Kootenay National Parks.

A prescribed burning program at Kananaskis Forest Experiment Station is in its third and final year. A total of 14 one-acre experimental burns and five hazard reduction burns have been completed and measurements taken to determine fire behavior and effects. Fire intensity and depth of burn increase with drought. Six additional experimental burns are planned for the summer of 1971.



The new Canadian Fire Behaviour Rating System has been introduced to and accepted by fire control agencies in the Prairies Region. The various indices are calculated daily from weather observations made at a number of stations in the East Slope area. Fire research personnel are available for the purpose of explaining the make-up and use of the new system.

A comprehensive study of forest-floor fuels in Alberta has involved some sampling in the East Slope Area. One square-foot duff samples are extracted and their physical characteristics and water-holding capacities determined. The weight and depth of the L, F and H layers are related to stand characteristics. The study is scheduled for completion in 1972.

Grazing Permits	\$ 8,572
Right of Entry	1,045
Miscellaneous Leases	1,881
Sundry Revenue	2,630
Timber Permits	1,758
Special Timber Permit	2,824
Timber Fees, Rental, Etc.	20,475
Timber Dues	232,222
Timber Miscellaneous Revenue	220
	\$340,757

Administrative expenditures by the Board amounted to \$76,510 provided by the Province of Alberta under Vote 1819 as detailed hereunder:

Motive Equipment Operation	\$ 1,017
Labour Services	244
Fees and Commissions	1,488
Office Expense	281
Equipment Purchase, Repair and Rental	750
Personnel Benefits	316
Printing, Stationery, Materials & Supplies	7,806
Telephone	574
Travelling Expense	2,091
	18,367
Salaries - Public Service	35,210
Salaries and Wages - Board	25,933
	\$76,510

A current account is maintained with the Royal Bank of Canada, Calgary Main Branch, from which the Board discharges its administrative expenses. Expenditures by the Board are audited monthly by the Provincial Auditor.





## ACCOUNTING

The statements included in this section of the report reflect the revenue derived by the Alberta Forest Service during fiscal year 1970-71 from surface rights in the Conservation Area and expenditures by the Board and the Province for the maintenance and administration of the Area.

**REVENUE** Revenue from surface rights amounted to \$340,655, relatively unchanged over the past three years. Revenues are summarized hereunder:

Grazing Permits	\$ 76,572
Right-of-Entry	1,065
Miscellaneous Leases	1,881
Sundry Revenue	2,636
Timber Permits	1,756
Special Timber Permits	2,824
Timber Fees, Rental, Etc.	20,479
Timber Dues	233,222
Timber Miscellaneous Revenue	220
	<u>\$340,655</u>

Administrative expenditures by the Board amounted to \$76,510 provided by the Province of Alberta under Vote 1819 as detailed hereunder:

Mobile Equipment Operation	\$ 1,017
Labour Services	244
Fees and Commissions	1,489
Office Expense	381
Equipment Purchase, Repair and Rental	750
Personnel Benefits	306
Printing, Stationery, Materials & Supplies	7,506
Telephone	678
Travelling Expenses	<u>2,991</u>
	15,362
Salaries - Public Service	35,210
Salaries and Wages - Board	25,938
	<u>\$76,510</u>

A current account is maintained with the Royal Bank of Canada, Calgary Main Branch, from which the Board disperses its administrative expense. Expenditures by the Board are audited monthly by the Provincial Auditor.









**\* ROCKY MOUNTAINS FOREST RESERVE  
RECREATION AREA DEVELOPMENT PROGRAM**

Facilities and Services

Board Approved Recreation Area Site Plans				Facilities and Services								
	Picnic Section	Tent Section	Trailer Section	Boat Launching	Developed Water Well	Wood Supply	Caretaker Services	Weekly Cleanup Inspection	Shelter	Planned Trailer Dumping Disposal Station	ARDA Supported	Parking Areas
Ram Falls	50	30	20	—	X	X	X	—	X	X	X	X
Fish Lake	20	11	19	X	X	X	X	—	X	X	X	X
Upper Shunda Creek	20	15	5	—	X	X	—	X	—	—	X	X
Eau Claire	10	10	20	—	X	X	—	X	X	X	—	X
Cat Creek	10	10	—	—	X	X	—	X	X	—	—	X
Cataract Creek	10	10	—	—	X	X	—	X	X	—	—	X
Burnt Timber	10	10	8	—	X	X	—	X	—	—	X	X
Gooseberry Flat	30	10	10	—	X	X	—	X	—	—	—	X
Kananaskis Lakes	—	18	—	X	X	X	—	X	—	—	—	—
Beaver Flat	10	10	—	—	X	X	—	X	X	—	—	X
Spray Lakes	—	21	—	X	X	X	—	X	—	—	—	—
Red Deer River	12	15	26	—	X	X	—	X	X	—	—	X
Livingstone Falls	40	12	4	—	X	X	—	X	X	—	—	X
Racehorse	40	10	6	—	X	X	—	X	X	—	—	X
Lynx Creek	20	10	6	—	X	X	—	X	—	X	—	X
Waiparous Creek	10	20	20	—	X	X	—	X	X	X	—	X
James Wilson	10	5	10	—	X	X	—	X	X	—	X	X
North Ram River	10	10	—	—	X	X	—	X	—	—	X	X
Chinook	—	19	12	X	X	X	—	X	X	—	—	X
Deer Creek	10	—	—	—	—	X	—	X	X	—	X	X
Dutch Creek	20	16	8	—	X	X	—	X	X	X	—	X
Seven Mile	10	10	8	—	X	X	—	X	X	—	X	X
Prairie Creek	10	10	10	—	X	X	—	X	X	—	X	X
Allison	10	9	8	—	X	X	—	X	X	—	—	X
Indian Grave	10	9	9	—	X	X	—	X	X	—	—	X
Blue Rock	10	13	—	—	X	X	—	X	—	—	—	X
Beaver Mines Lake	50	30	20	X	X	X	—	X	—	—	—	X
Sibbald Lake	10	14	14	X	X	X	—	X	—	—	—	X
	452	367	243									

\* Program Development during 1965-70

X Facilities provided free



## GRAZING 1970

	CROWSNEST FOREST		BOW RIVER FOREST		CLEARWATER—ROCKY FOREST		FOREST RESERVE TOTAL	
	1969	1970	1969	1970	1969	1970	1969	1970
Cattle	14,807	12,391	9,090	8,891	1,116	1,038	25,013	22,320
Sheep	922						922	
Horses			286	232	142	35	428	267
TOTAL	15,729	12,391	9,376	9,123	1,258	1,073	26,363	22,587
Actual Use in A.U.M. *	45,611	46,695	33,898	33,045	5,957	3,768	85,466	83,508
No. of Permits	175	170	86	86	20	14	281	270
No. of Allotments	49	50	34	32	12	9	95	91
Revenue	\$42,744.60	\$42,197.50	\$29,526.20	\$28,502.80	\$3,798.42	\$3,540.28	\$76,069.22	\$74,240.58

\* A.U.M. — Animal Unit Month: the amount of forage required for one animal unit for one month.





**GOVERNMENT OF THE PROVINCE OF ALBERTA**

**OFFICE OF THE PROVINCIAL AUDITOR**

**EDMONTON,**

June 4, 1971

Eastern Rockies Forest Conservation  
Board  
CALGARY 2, Alberta

I have examined the Balance Sheet of the Eastern Rockies Forest Conservation Board as at March 31, 1971, and the Statements of Maintenance Expenditure and Government of Canada and Government of the Province of Alberta Equity for the year then ended. My examination included a general review of the accounting procedures and such tests of accounting records and other supporting evidence as I considered necessary in the circumstances.

In my opinion these financial statements present fairly the financial position of the Board as at March 31, 1971, and its maintenance expenditure for the year then ended, in accordance with generally accepted accounting principles applied on a basis consistent with that of the preceding year.

C. X

  
F. C. A.  
Provincial Auditor.



EASTERN ROCKIES FOREST CONSERVATION BOARD

BALANCE SHEET \*

AS AT MARCH 31, 1971

ASSETS

Workmen's Compensation Board deposit	\$ 5,530.20
Value of loose tools and equipment transferred to the Province of Alberta as at April 1, 1959	173,496.38
Capital improvements and works	<u>5,716,615.20</u>
	\$ 5,895,641.78

LIABILITIES

Government of Canada and Government of the Province of Alberta equity, Statement C	\$ 5,895,641.78
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\* Notes 1 and 2

The accompanying notes are part  
of these financial statements.

This is the Balance Sheet referred to in my  
report of June 4, 1971, addressed to the  
Eastern Rockies Forest Conservation Board.

C. X.  F. C. A.  
Provincial Auditor.





EASTERN ROCKIES FOREST CONSERVATION BOARDSTATEMENT OF MAINTENANCE EXPENDITURE \*FOR THE YEAR ENDED MARCH 31, 1971

Maintenance expenses:		
Salaries	\$679,719.20	
Wages	125,510.49	
Equipment and motor vehicle expense	100,259.80	
Rentals	55,054.42	
Maintenance, material and operation expense	29,236.36	
Heat, light and power	17,951.11	
Administration and general expense	14,601.91	
Travelling	6,448.13	
Honorarium	1,000.00	
Telephone and telegraph	678.44	
Freight, express and cartage	631.25	
Postage	306.05	
Pensions	152.84	
Advertising	25.00	
		\$1,031,575.00
Automobiles, trucks and mobile equipment		55,350.73
Furnishings, equipment and tools		808.97
		<u>\$1,087,734.70</u>
Provided by:		
Appropriations 1815, 1819 and 1821		<u>\$1,087,734.70</u>

\* Note 3



EASTERN ROCKIES FOREST CONSERVATION BOARD

STATEMENT OF GOVERNMENT OF CANADA AND GOVERNMENT  
OF THE PROVINCE OF ALBERTA EQUITY

FOR THE YEAR ENDED MARCH 31, 1971

Balance as at March 31, 1970	\$ 5,895,370.23
Add:	
Workmen's Compensation Board deposit interest	<u>271.55</u>
Government of Canada and Government of the Province of Alberta equity as at March 31, 1971	\$ <u>5,895,641.78</u>





EASTERN ROCKIES FOREST CONSERVATION BOARD

NOTES TO THE FINANCIAL STATEMENTS

MARCH 31, 1971

- Note 1     Total capital expenditures from inception to March 31, 1955, amounting to \$6,278,906.10 were made from funds provided by the Government of Canada (as authorized under Section 8(a) of the Memorandum of Agreement set forth in the Schedules to Chapter 59, Statutes of Canada, 1947, and Chapter 20, Statutes of Alberta, 1948, and amendment Acts, 1957) for the location and construction of forest improvements, the making of a forest inventory, reforestation, and such other works and services as the Board considered necessary in that area of the East Slope of the Rocky Mountains forming part of the watershed of the Saskatchewan River, as more definitely described in the Appendices to the Acts. The total expenditure was not to exceed \$6,300,000.00 during the seven years ended March 31, 1955.
- Note 2     Section 20 Of the Memorandum of Agreement provides that upon termination of the Agreement:
- (a) All improvements or works resulting from the carrying out of the programs of the Board shall belong to the Province.
  - (b) All other property acquired by the Board shall belong to the Province.
- Note 3     The total amount expended by the Board was provided by the Government of the Province of Alberta in accordance with Section 2(a)(ii) of the Memorandum of Agreement, dated June 17, 1953, between the Government of Canada and the Government of the Province of Alberta as set forth in the Schedules to Chapter 41, Statutes of Canada, 1952, and Chapter 36, Statutes of Alberta, 1953.
- The remuneration and expenses of members of the Board were paid by the Governments of Canada and the Province of Alberta in accordance with Section 2(b)(iii) of the Memorandum of Agreement. The amounts paid by the Province of Alberta, including the honorarium of \$1,000.00 to A. T. Baker, have been incorporated into the Statement of Maintenance Expenditure.

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